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DATE: Saturday, January 10, 2004

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		<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L12	L11 and l7	19
<input type="checkbox"/>	L11	19970610	51
<input type="checkbox"/>	L10	L9 and (dna or cdna or polynucleotide or nucleotide or nucleic acid)	264
<input type="checkbox"/>	L9	L8 and Pyrococcus furiosus	268
<input type="checkbox"/>	L8	protease or proteinase or peptidase or Endopeptidase or Endoprotease or Endoproteinase	56726
<input type="checkbox"/>	L7	L6 or l5 or l4 or l3 or l2 or l1	27387
<input type="checkbox"/>	L6	(536/23.2)!..ccls.	10120
<input type="checkbox"/>	L5	(435/320.1)!..ccls.	22021
<input type="checkbox"/>	L4	(435/252.3)!..ccls.	7752
<input type="checkbox"/>	L3	(435/219)!..ccls.	911
<input type="checkbox"/>	L2	(435/212)!..ccls.	769
<input type="checkbox"/>	L1	(435/183)!..ccls.	4321

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Search Results - Record(s) 1 through 19 of 19 returned.

☐ 1. Document ID: US 6531296 B1

L12: Entry 1 of 19

File: USPT

Mar 11, 2003

US-PAT-NO: 6531296

DOCUMENT-IDENTIFIER: US 6531296 B1

TITLE: Nuclear tyrosine kinase Rak

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6335160 B1

L12: Entry 2 of 19

File: USPT

Jan 1, 2002

US-PAT-NO: 6335160

DOCUMENT-IDENTIFIER: US 6335160 B1

TITLE: Methods and compositions for polypeptide engineering

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 3. Document ID: US 6090606 A

L12: Entry 3 of 19

File: USPT

Jul 18, 2000

US-PAT-NO: 6090606

DOCUMENT-IDENTIFIER: US 6090606 A

TITLE: Cleavage agents

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 4. Document ID: US 6077664 A

L12: Entry 4 of 19

File: USPT

Jun 20, 2000

US-PAT-NO: 6077664

DOCUMENT-IDENTIFIER: US 6077664 A

TITLE: Thermophilic DNA polymerases from *Thermotoga neapolitana*

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 5. Document ID: US 6001645 A

US-PAT-NO: 6001645

DOCUMENT-IDENTIFIER: US 6001645 A

TITLE: Thermophilic DNA polymerases from thermotoga neapolitana

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Image
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☐ 6. Document ID: US 5958739 A

L12: Entry 6 of 19

File: USPT

Sep 28, 1999

US-PAT-NO: 5958739

DOCUMENT-IDENTIFIER: US 5958739 A

TITLE: Mutant .alpha.-amylase

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Image
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☐ 7. Document ID: US 5948663 A

L12: Entry 7 of 19

File: USPT

Sep 7, 1999

US-PAT-NO: 5948663

DOCUMENT-IDENTIFIER: US 5948663 A

TITLE: Purified thermostable pyrococcus furiosus DNA polymerase I

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Image
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☐ 8. Document ID: US 5874282 A

L12: Entry 8 of 19

File: USPT

Feb 23, 1999

US-PAT-NO: 5874282

DOCUMENT-IDENTIFIER: US 5874282 A

**** See image for Certificate of Correction ****TITLE: Purified DNA polymerase from Bacillus stearothermophilus ATTC 12980

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Image
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☐ 9. Document ID: US 5866395 A

L12: Entry 9 of 19

File: USPT

Feb 2, 1999

US-PAT-NO: 5866395

DOCUMENT-IDENTIFIER: US 5866395 A

**** See image for Certificate of Correction ****TITLE: Purified thermostable pyrococcus furiosus DNA polymerase I

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Image
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☐ 10. Document ID: US 5843669 A

L12: Entry 10 of 19

File: USPT

Dec 1, 1998

US-PAT-NO: 5843669

DOCUMENT-IDENTIFIER: US 5843669 A

TITLE: Cleavage of nucleic acid acid using thermostable methanococcus jannaschii FEN-1 endonucleases

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 11. Document ID: US 5830740 A

L12: Entry 11 of 19

File: USPT

Nov 3, 1998

US-PAT-NO: 5830740

DOCUMENT-IDENTIFIER: US 5830740 A

**** See image for Certificate of Correction ****

TITLE: Serine protease operative between 75.degree.C. and 103.degree.C.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 12. Document ID: US 5756339 A

L12: Entry 12 of 19

File: USPT

May 26, 1998

US-PAT-NO: 5756339

DOCUMENT-IDENTIFIER: US 5756339 A

TITLE: Hyperthermostable protease gene

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 13. Document ID: US 5744345 A

L12: Entry 13 of 19

File: USPT

Apr 28, 1998

US-PAT-NO: 5744345

DOCUMENT-IDENTIFIER: US 5744345 A

TITLE: Hyperthermostable .beta.-galactosidase gene, enzyme encoded thereby, and process for production

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 14. Document ID: US 5719056 A

L12: Entry 14 of 19

File: USPT

Feb 17, 1998

US-PAT-NO: 5719056

DOCUMENT-IDENTIFIER: US 5719056 A

TITLE: Proteins from pyrococcus furiosus

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Draw Desc	Image
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☐ 15. Document ID: US 5677172 A

L12: Entry 15 of 19

File: USPT

Oct 14, 1997

US-PAT-NO: 5677172

DOCUMENT-IDENTIFIER: US 5677172 A

TITLE: Method for production of proteins in yeast

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Draw Desc	Image
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☐ 16. Document ID: US 5602011 A

L12: Entry 16 of 19

File: USPT

Feb 11, 1997

US-PAT-NO: 5602011

DOCUMENT-IDENTIFIER: US 5602011 A

TITLE: Purified *Thermococcus barossii* DNA polymerase

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Draw Desc	Image
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☐ 17. Document ID: US 5545552 A

L12: Entry 17 of 19

File: USPT

Aug 13, 1996

US-PAT-NO: 5545552

DOCUMENT-IDENTIFIER: US 5545552 A

**** See image for Certificate of Correction ****

TITLE: Purified thermostable *pyrococcus furiosus* DNA polymerase I

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Draw Desc	Image
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☐ 18. Document ID: US 5491086 A

L12: Entry 18 of 19

File: USPT

Feb 13, 1996

US-PAT-NO: 5491086

DOCUMENT-IDENTIFIER: US 5491086 A

TITLE: Purified thermostable nucleic acid polymerase and DNA coding sequences from *pyrodictium* species

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Draw Desc	Image
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☐ 19. Document ID: US 5366883 A

L12: Entry 19 of 19

File: USPT

Nov 22, 1994

US-PAT-NO: 5366883

DOCUMENT-IDENTIFIER: US 5366883 A

TITLE: .alpha.-amylase gene

Full	Title	Citation	Front	Review	Classification	Date	Reference	3rd Party	Abstract	Claims	KWIC	Draw Desc	Image
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
L11 and L7	19

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=> s protease/cn
L3 1 PROTEASE/CN

=> d

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN

RN 9001-92-7 REGISTRY

CN Proteinase (9CI) (CA INDEX NAME)

OTHER NAMES:

CN .alpha.-N-Benzoyl-DL-arginine-p-nitroanilide hydrolase

CN 537 Acidic protease

CN Actinase

CN Alcalase 2.5L DX

CN Alcalase 2.4L FG

CN Alcalase 2.5L Type DX

CN Alkaline protease-L FG

CN ALP 901

CN Alphamalt BK 5020

CN Alphamalt LQ 4020

CN AO protease

CN APL 901

CN Aquatinase E

CN Arginine esterase

CN AS 1.398

CN AS 10

CN Azocaseinase

CN BAPAase

CN BAPNAase

CN Benzoyl arginine arylamidase

CN Benzoyl-DL-arginine-p-nitroanilide hydrolase

CN Biopraser SP 4FG

CN Bioprotease A

CN Bioprotease N 100P

CN Biosoft PW

CN Carbonyl hydrolase

CN Casein endopeptidase

CN Caseinase

CN Cleanase AP 100-PWC

CN Corolase 7089

CN Corolase L 10

CN DA 10

CN DA 10 (enzyme)

CN Denatyme AP

CN Deozyme

CN Durazyme 16.0L

CN Endopeptidase

CN Endopeptidase O

CN Endoprotease

CN Endoproteinase

CN Enzeco fungal acid protease

CN Enzylase K 40

CN Enzylon SAL

CN Enzylon SAL 300

CN Enzymes, proteolytic

CN Esteroproteinase

CN Everlase 16L

CN Everlase 16L Type EX

CN Everlase 8T

CN Fibrinase

CN **Protease**

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY

DR 9001-93-8, 9012-23-1, 9040-76-0, 125498-72-8, 125752-86-5, 123779-18-0,
124041-97-0, 120038-39-3, 120038-40-6, 105913-13-1, 118901-82-9,
144906-30-9, 143404-30-2, 143404-41-5, 80804-52-0, 116267-38-0,
117278-03-2, 117698-27-8, 118390-80-0

MF Unspecified

CI COM, MAN

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,

CA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN,
CSCHEM, CSNB, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB,
IPA, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PLASPEC*, PROMT, RTECS*,
TOXCENTER, TULSA, USPAT2, USPATFULL, VTB

(*File contains numerically searchable property data)

Other Sources: EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

37744 REFERENCES IN FILE CA (1907 TO DATE)

407 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

37773 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=>.d full his

(FILE 'HOME' ENTERED AT 16:25:30 ON 10 JAN 2004)

L1 FILE 'REGISTRY' ENTERED AT 16:25:38 ON 10 JAN 2004
1 SEA ABB=ON PLU=ON PROTEASE/CN
SET SMARTSELECT ON
L*** DEL SEL L1 1- CHEM : 141 TERMS
SET SMARTSELECT OFF

FILE 'HCAPLUS' ENTERED AT 16:26:08 ON 10 JAN 2004

L2 FILE 'REGISTRY' ENTERED AT 16:26:14 ON 10 JAN 2004
SET SMARTSELECT ON
SEL PLU=ON L1 1- CHEM : 141 TERMS
SET SMARTSELECT OFF

FILE 'HCAPLUS' ENTERED AT 16:26:14 ON 10 JAN 2004
E PYROCOCCUS FURIOSUS/CT
E E3+ALL
S PROTEASE/CN

L3 FILE 'REGISTRY' ENTERED AT 16:26:41 ON 10 JAN 2004
1 SEA ABB=ON PLU=ON PROTEASE/CN

L4 FILE 'HCAPLUS' ENTERED AT 16:26:42 ON 10 JAN 2004
37773 SEA ABB=ON PLU=ON L3
L5 14 SEA ABB=ON PLU=ON L4 (L) (PYROCOCCUS FURIOSUS)
L6 0 SEA ABB=ON PLU=ON L5 (L) (DNA OR CDNA OR POLYNUCLEOTIDE OR
NUCLEOTIDE OR NUCLEIC ACID)
L7 9 SEA ABB=ON PLU=ON L5 AND PD<19970610
D IBIB AB 1-9

=>. d ibib ab 1-9

L7 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:278327 HCAPLUS

DOCUMENT NUMBER: 125:2522

TITLE: Sequence, expression in *Escherichia coli*, and analysis of the gene encoding a novel intracellular protease (PfpI) from the hyperthermophilic archaeon *Pyrococcus furiosus*

AUTHOR(S): Halio, Sheryl B.; Blumentals, Ilse I.; Short, Stephen A.; Merrill, Barbara M.; Kelly, Robert M.

CORPORATE SOURCE: Dep. Chem. Eng., North Carolina State Univ., Raleigh, NC, 27695-7905, USA

SOURCE: Journal of Bacteriology (1996), 178(9), 2605-2612

CODEN: JOBAAAY; ISSN: 0021-9193

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A previously identified intracellular proteolytic activity in the hyperthermophilic archaeon *Pyrococcus furiosus* (I. I. Blumentals, A. S. Robinson, and R. M. Kelly, Appl. Environ. Microbiol. 56:1992-1998, 1990) was found to be homomultimer consisting of 18.8-kDa subunits. Dissocn. of this native P. furiosus protease I (PfpI) into a single subunit was seen by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) but only after trichloroacetic acid pptn.; heating to 95.degree.C in the presence of 2% SDS and 80 mM dithiothreitol did not dissoc. the protein. The gene (pfpI) coding for this protease was located in genomic digests by Southern blotting with probes derived from the N-terminal amino acid sequence. PfpI was cloned, sequenced, and expressed in active form in *Escherichia coli* as a fusion protein with a histidine tag. The recombinant protease from E. coli showed max. proteolytic activity at 95.degree.C, and its half-life was 19 min at this temp. This level of stability was significantly below that previously reported for the enzyme purified by electroelution of a 66-kDa band from SDS-PAGE after extended incubation of cell exts. at 98.degree.C in 1% SDS (>30 h). The pfpI gene codes for a polypeptide of 166 amino acid residues lacking any conserved protease motifs; no protease activity was detected for the 18.8-kDa PfpI subunit (native or recombinant) by substrate gel assay. Although an immunol. relationship of this protease to the eukaryotic proteasome has been seen previously, searches of the available databases identified only two similar amino acid sequences: an open reading frame of unknown function from *Staphylococcus aureus* NCTC 8325 (171 amino acid residues, 18.6 kDa, 41% identity) and an open reading frame also of unknown function in E. coli (172 amino acid residues, 18.8 kDa, 47% identity). Primer extension expts. with P. furiosus total RNA defined the 5' end of the transcript. There are only 10 nucleotides upstream of the start of translation; therefore, it is unlikely that there are any pre- or pro-regions assocd. with PfpI which could have been used for targeting or assembly of this protease. Although PfpI activity appears to be the dominant proteolytic activity in P. furiosus cell exts., the physiol. function of PfpI is unclear.

L7 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:625002 HCAPLUS

DOCUMENT NUMBER: 121:225002

TITLE: Molecular cloning of gene for super heat-resistant protease of *Pyrococcus furiosus*

INVENTOR(S): Yamamoto, Katsuhiko; Nakajima, Kyoko; Koyama, Nobuhito; Mita, Masanori; Asada, Kyojo; Kato, Ikunoshin

PATENT ASSIGNEE(S): Takara Shuzo Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06197770	A2	19940719	JP 1993-17068	19930107 <--
JP 3341915	B2	20021105		

PRIORITY APPLN. INFO.: JP 1993-17068 19930107

AB The gene for super heat-resistant protease of *Pyrococcus furiosus* DSM3638 is isolated and expressed in *Escherichia coli* (sequences not given). The enzyme exhibits a pH optimum of 6.0.apprx.7.0 and temp. optimum of 80.apprx.100.degree..

L7 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:211515 HCAPLUS

DOCUMENT NUMBER: 120:211515

TITLE: Molecular cloning of hyperthermophilic alpha-amylase gene of archaeobacterium

INVENTOR(S): Asada, Kiyozo; Uemori, Takashi; Mukai, Hiroyuki; Kato, Ikunoshin; Laderman, Kenneth; Anfinson, Christian B.

PATENT ASSIGNEE(S): Johns Hopkins University, USA; Takara Shuzo Co. Ltd.

SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 579360	A2	19940119	EP 1993-303800	19930517 <--
EP 579360	A3	19950315		
EP 579360	B1	19980729		
R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
US 5366883	A	19941122	US 1992-894212	19920609 <--
JP 06062869	A2	19940308	JP 1993-164308	19930607 <--
JP 3266166	B2	20020318		

PRIORITY APPLN. INFO.: US 1992-894212 A 19920609

AB The gene for a hyperthermophilic .alpha.-amylase of *Pyrococcus furiosus* was cloned and sequenced, and its amino acids deduced. The gene can be used for the prodn. of .alpha.-amylase in a procaryotic host such as *Escherichia* or *Bacillus*. A process for producing a protein, e.g., an enzyme, of *P. furiosus* in transgenic *Escherichia* or *Bacillus* is also claimed.

L7 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:598569 HCAPLUS

DOCUMENT NUMBER: 119:198569

TITLE: Protease from hyperthermophilic *Pyrococcus furiosus*

INVENTOR(S): Kelly, Robert M.; Robinson, Anne K. S.; Blumentals, Ilse I.; Brown, Stephen H.; Anfinson, Christian B.

PATENT ASSIGNEE(S): Johns Hopkins University, USA

SOURCE: U.S., 17 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5242817	A	19930907	US 1989-406327	19890912 <--
US 5391489	A	19950221	US 1993-83536	19930630 <--

PRIORITY APPLN. INFO.: US 1989-406327 19890912

AB A protease is prepd. from the culture of hyperthermophilic *Pyrococcus furiosus*. The enzyme remains 50% active after incubating at 98.degree. for 60 h or in the presence of SDS for 12 h. The enzyme is comprised of 5 species when detd. by SDS-PAGE: 140, 125, 116, 102, and 66 kDA. It has a pH optimum of 6.8 at 98.degree., a temp. optimum of >100.degree., and trypsin-like cleavage with addnl. activities. It is classified as a metalloprotease through inhibitor studies.

L7 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:229939 HCAPLUS
DOCUMENT NUMBER: 118:229939
TITLE: Influence of tungsten on metabolic patterns in
Pyrococcus furiosus, a hyperthermophilic archaeon
AUTHOR(S): Schicho, Richard N.; Snowden, Lesley J.; Mukund,
Swarnalatha; Park, Jae Bum; Adams, Michael W. W.;
Kelly, Robert M.
CORPORATE SOURCE: Dep. Chem. Eng., Johns Hopkins Univ., Baltimore, MD,
21218, USA
SOURCE: Archives of Microbiology (1993), 159(4),
380-5
CODEN: AMICCW; ISSN: 0302-8933
DOCUMENT TYPE: Journal
LANGUAGE: English

AB P. furiosus is a strictly anaerobic heterotroph that grows optimally at
.apprx.100.degree.. It can be cultured in an artificial seawater-based
medium with either peptides or maltose as the C source. Significant
stimulation of cell yields were obsd. when trace levels of W (as WO42-)
were added to an energy-limited chemostat culture of P. furiosus when
maltose is present, but not when peptides were the sole C source. The
addn. of W also led to dramatic increases in the specific activities
within cell-free exts. of aldehyde ferredoxin oxidoreductase, which is a
W-Fe-S protein. The addn. of W to cells growing in maltose/peptide medium
dramatically reduced the specific activity of intracellular proteases,
suggesting a preference for the utilization of maltose over peptides as
the C and energy source in the presence of W.

L7 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:210942 HCAPLUS
DOCUMENT NUMBER: 116:210942
TITLE: Regulation of proteolytic activity in the
hyperthermophile Pyrococcus furiosus
AUTHOR(S): Snowden, Lesley J.; Blumentals, Ilse I.; Kelly, Robert
M.
CORPORATE SOURCE: Dep. Chem. Eng., Johns Hopkins Univ., Baltimore, MD,
21218, USA
SOURCE: Applied and Environmental Microbiology (1992
) , 58(4), 1134-41
CODEN: AEMIDF; ISSN: 0099-2240
DOCUMENT TYPE: Journal
LANGUAGE: English

AB P. furiosus grew on casein or peptides as the sole C, energy, and N
sources, while maltose could be used as a C and energy source only if
peptides were present in the medium. A mixt. of all 20 single amino acids
could not replace the peptide requirement. Specific intracellular
proteolytic activity was induced under low casein or tryptone levels and
was decreased by the addn. of maltose in both peptide-limiting and
peptide-rich media in batch and continuous cultures. In a peptide-limited
chemostat, activity towards azocasein and MeO-Suc-Arg-Pro-Tyr-p-
nitroanilide reached a max. at a diln. rate of 0.28/h, while activity
toward L-lysine-p-nitroanilide reached a max. at 0.50/h. Under
peptide-limiting conditions, levels of the 66-kDa protease (S66) were
enhanced relative to those of other cell proteins. Preliminary evidence
suggests that this protease is immunol. related to the eukaryotic
multicatalytic proteinase complex (proteasome).

L7 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1991:531678 HCAPLUS
DOCUMENT NUMBER: 115:131678
TITLE: Characterization of growth physiology, cell-sulfur
interaction, and SDS-resistant proteolytic activity in
the hyperthermophilic archaeobacterium Pyrococcus
furiosus
AUTHOR(S): Blumentals, Ilse Ileana
CORPORATE SOURCE: Johns Hopkins Univ., Baltimore, MD, USA
SOURCE: (1991) 157 pp. Avail.: Univ. Microfilms
Int., Order No. DA9113642
From: Diss. Abstr. Int. B 1991, 51(12, Pt. 1), 5998

DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable

L7 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:425707 HCAPLUS
DOCUMENT NUMBER: 115:25707
TITLE: Heterogeneity of proteinases from the
hyperthermophilic archaeobacterium *Pyrococcus furiosus*
Connaris, Helen; Cowan, Don A.; Sharp, Richard J.
CORPORATE SOURCE: Dep. Biochem., Univ. Coll. London, London, WC1E 6BT,
UK
SOURCE: Journal of General Microbiology (1991),
137(5), 1193-9
CODEN: JGMIAN; ISSN: 0022-1287

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Intracellular and extracellular samples from *P. furiosus* showed the
presence of multiple active proteinases. Using gelatin-contg. SDS-PAGE,
13 activity bands were visualized with apparent mol. masses of
66-135 kDa. Characterization studies revealed these bands to be due to
discrete polypeptides, and not artifacts. Results from gel permeation
chromatog., sucrose d. gradient centrifugation, and non-denaturing PAGE
suggested that some of these proteolytic polypeptides may exist as active
aggregates either in vivo or in vitro before being dissocd. by SDS to
active monomers.

L7 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:494490 HCAPLUS
DOCUMENT NUMBER: 113:94490
TITLE: Characterization of sodium dodecyl sulfate-resistant
proteolytic activity in the hyperthermophilic
archaeobacterium *Pyrococcus furiosus*
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M.
CORPORATE SOURCE: Dep. Chem. Eng., Johns Hopkins Univ., Baltimore, MD,
21218, USA
SOURCE: Applied and Environmental Microbiology (1990
) , 56(7), 1992-8
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LANGUAGE: English

AB Cell exts. from *P. furiosus* contained 5 proteases, two of which (S66 and
S102) are resistant to SDS denaturation. Cell exts. incubated at
98.degree. in the presence of 1% SDS for 24 h exhibited substantial
cellular proteolysis such that only 4 proteins could be visualized by
amido black-Coomassie brilliant blue staining of SDS-polyacrylamide gels.
The SDS-treated ext. retained 19% of the initial proteolytic activity as
represented by 2 proteases, S66 (66 kDa) and S102 (102 kDa). Immunoblot
anal. with guinea pig sera contg. antibodies against protease S66
indicated that S66 is related neither to S102 nor to the other proteases.
The results of this anal. also suggest that S66 might be the hydrolysis
product of a 200-kDa precursor which does not have proteolytic activity.
The 24-h SDS-treated ext. showed unusually thermostable proteolytic
activity; the measured half-life at 98.degree. was 33 h. Proteases S66
and S102 were also resistant to denaturation by 8M urea, 80 mM
dithiothreitol, and 5% .beta.-mercaptoethanol. Purified protease S66 was
inhibited by phenylmethylsulfonyl fluoride and diisopropyl fluorophosphate
but not by EDTA, ethylene glycol-bis(.beta.-aminoethyl
ether)-N,N,N',N'-tetraacetic acid, or iodoacetic acid. These results
indicate that S66 is a serine protease. Amino acid ester hydrolysis
studies showed that protease S66 was hydrolytically active towards
N-benzoyl-L-arginine Et ester.

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OM protein - nucleic search, using frame_plus_p2n model

Run on: December 1, 2003, 14:31:28 ; Search time 5408.62 Seconds
(without alignments)
3116.277 Million cell updates/sec

Title: US-10-090-624-1
Perfect score: 2146
Sequence: 1 AELEGLDESAAQVMATYVWN.....SANYQVDVVS DGSLSQPGSS 412

Scoring table: BLOSUM62
Xgapop 10.0 , Xgapext 0.5
Ygapop 10.0 , Ygapext 0.5
Fgapop 6.0 , Fgapext 7.0
Delop 6.0 , Delect 7.0

Searched: 2888711 seqs, 20454813386 residues

Total number of hits satisfying chosen parameters: 5777422

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Command line parameters:

-MODEL=frame+_p2n.model -DEV=xlh

-
Q=/cgn2_1/USPTO_spool/US10090624/runat_01122003_090344_19330/app_query.fasta_1.1
493

-DB=GenEmbl -QFMT=fastap -SUFFIX=rge -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10090624_@CGN_1_1_7634_@runat_01122003_090344_19330 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database : GenEmbl:*

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OM nucleic - nucleic search, using sw model

Run on: December 1, 2003, 11:25:13 ; Search time 4805 Seconds
(without alignments)
10523.267 Million cell updates/sec

Title: US-10-090-624-2
Perfect score: 1236
Sequence: 1 gcagaattagaaggactgga.....tttcacagcctggaagttca 1236

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2888711 seqs, 20454813386 residues

Total number of hits satisfying chosen parameters: 5777422

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*